

## Chapter 5: Treatment Recommendations

### 5 Administration & Implementation Strategy

Critical to the implementation of this Wildfire Hazard Mitigation Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving an elimination of the lives lost, and reduction in structures destroyed, infrastructure compromised, and unique ecosystems damaged that serve to sustain the way-of-life and economy of Lewis County and the region. Since there are many management agencies and thousands of private landowners in Lewis County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Lewis County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The land management agencies in Lewis County, specifically the Idaho Department of Lands, are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Lewis County.

All risk assessments were made based on the conditions existing during 2004-05, thus, the recommendations in this section have been made in light of those conditions. However, the components of risk and the preparedness of the county's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

As part of the Policy of Lewis County in relation to this planning document, this entire **Wildfire Mitigation Plan** should be reviewed annually at a special meeting of the Lewis County Commissioners, open to the public and involving all municipalities/jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed. A written review of the plan should be prepared (or arranged) by the Chairman of the County Commissioners, detailing plans for the year's activities, and made available to the general public ahead of the meeting (in accord with the Idaho Open Public Meeting Laws). Amendments to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment to the Wildfire Mitigation Plan. Re-evaluation of this plan should be made on the 5<sup>th</sup> anniversary of its acceptance, and every 5-year period following.

#### 5.1 Prioritization of Mitigation Activities

The prioritization process will include a special emphasis on benefit-cost analysis review. The process will reflect that a key component in funding decision is a determination that the project will provide an equivalent or more in benefits over the life of the project when compared with the costs. Projects will be administered by local jurisdictions with overall coordination provided by the County Emergency Management Coordinator.

County Commissioners and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal. Often the types of projects that the County can afford to do on their own are in relation

to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model. The County will consider all pre-disaster mitigation proposals brought before the County Commissioners by department heads, city officials, fire districts and local civic groups.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a guiding criterion in establishing project priorities. The county will understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects. FEMA's three grant programs (the post-disaster Hazard Mitigation Grant Program, the pre-disaster Flood Mitigation Assistance and Pre-Disaster Mitigation grant programs) that offer federal mitigation funding to state and local governments all include the benefit-cost and repetitive loss selection criteria.

The prioritization of projects will occur annually and be facilitated by the County Emergency Management Coordinator to include the County Commissioner's Office, City Mayors and Councils, Fire District Chiefs and Commissioners, agency representatives (USFS, State Lands, etc.). The prioritization of projects will be based on the selection of projects which create a balanced approach to pre-disaster mitigation which recognizes the hierarchy of treating in order (highest first):

- People and Structures
- Infrastructure
- Local and Regional Economy
- Traditional Way of Life
- Ecosystems

### **5.1.1 Prioritization Scheme**

A numerical scoring system is used to prioritize projects. This prioritization serves as a guide for the county when developing mitigation activities. This project prioritization scheme has been designed to rank projects on a case by case basis. In many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The county mitigation program does not want to restrict funding to only those projects that meet the high priorities because what may be a high priority for a specific community may not be a high priority at the county level. Regardless, the project may be just what the community needs to mitigate disaster. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the County and community level.

To implement this case by case concept, a more detailed process for evaluating and prioritizing projects has been developed. Any type of project, whether county or site specific, will be prioritized in this more formal manner.

To prioritize projects, a general scoring system has been developed. This prioritization scheme has been used in statewide all hazard mitigations plans. These factors range from benefit-cost ratios, to details on the hazard being mitigated, to environmental impacts.

Since planning projects are somewhat different than non-planning projects when it comes to reviewing them, different criteria will be considered, depending on the type of project.

The factors for the non-planning projects include:

- Cost/Benefit
- Population Benefit

- Property Benefit
- Economic Benefit
- Project Feasibility (environmentally, politically, socially)
- Hazard Magnitude/Frequency
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development
- Potential project effectiveness and sustainability

The factors for the planning projects include:

- Cost/Benefit
- Vulnerability of the community or communities
- Potential for repetitive loss reduction
- Potential to mitigate hazards to future development

Since some factors are considered more critical than others, two ranking scales have been developed. A scale of 1-10, 10 being the best, has been used for cost, population benefit, property benefit, economic benefit, and vulnerability of the community. Project feasibility, hazard magnitude/frequency, potential for repetitive loss reduction, potential to mitigate hazards to future development, and potential project effectiveness and sustainability are all rated on a 1-5 scale, with 5 being the best. The highest possible score for a non-planning project is 65 and for a planning project is 30.

The guidelines for each category are as follows:

#### **5.1.1.1 Benefit / Cost**

The analysis process will include summaries as appropriate for each project, but will include benefit / cost analysis results. Projects with a negative benefit / cost analysis result will be ranked as a 0. Projects with a positive Benefit / Cost analysis will receive a score equal to the projects Benefit / Cost Analysis results divided by 10. Therefore a project with a BC ratio of 50:1 would receive 5 points, a project with a BC ratio of 100:1 (or higher) would receive the maximum points of 10.

#### **5.1.1.2 Population Benefit**

Population Benefit relates to the ability of the project to prevent the loss of life or injuries. A ranking of 10 has the potential to impact over 3,000 people. A ranking of 5 has the potential to impact 100 people, and a ranking of 1 will not impact the population. In some cases, a project may not directly provide population benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly effects the population, but should not be considered to have no population benefit.

#### **5.1.1.3 Property Benefit**

Property Benefit relates to the prevention of physical losses to structures, infrastructure, and personal property. These losses can be attributed to potential dollar losses. Similar to cost, a ranking of 10 has the potential to save over \$1,000,000 in losses, a ranking of 5 has the potential to save roughly \$100,000 in losses, and a ranking of 1 only has the potential to save less than \$100 in losses. In some cases, a project may not directly provide property benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive

as high of a rating as one that directly effects property, but should not be considered to have no property benefit.

#### **5.1.1.4 Economic Benefit**

Economic Benefit is related to the savings from mitigation to the economy. This benefit includes reduction of losses in revenues, jobs, and facility shut downs. Since this benefit can be difficult to evaluate, a ranking of 10 would prevent a total economic collapse, a ranking of 5 could prevent losses to about half the economy, and a ranking of 1 would not prevent any economic losses. In some cases, a project may not directly provide economic benefits, but may lead to actions that do, such as in the case of a study. Those projects will not receive as high of a rating as one that directly affects the economy, but should not be considered to have no economic benefit.

#### **5.1.1.5 Vulnerability of the Community**

For planning projects, the vulnerability of the community is considered. A community that has a high vulnerability with respect to other jurisdictions to the hazard or hazards being studied or planned for will receive a higher score. To promote planning participation by the smaller or less vulnerable communities in the state, the score will be based on the other communities being considered for planning grants. A community that is the most vulnerable will receive a score of 10, and one that is the least, a score of 1.

#### **5.1.1.6 Project Feasibility (Environmentally, Politically & Socially)**

Project Feasibility relates to the likelihood that such a project could be completed. Projects with low feasibility would include projects with significant environmental concerns or public opposition. A project with high feasibility has public and political support without environmental concerns. Those projects with very high feasibility would receive a ranking of 5 and those with very low would receive a ranking of 1.

#### **5.1.1.7 Hazard Magnitude/Frequency**

The Hazard Magnitude/Frequency rating is a combination of the recurrence period and magnitude of a hazard. The severity of the hazard being mitigated and the frequency of that event must both be considered. For example, a project mitigating a 10-year event that causes significant damage would receive a higher rating than one that mitigates a 500-year event that causes minimal damage. For a ranking of 5, the project mitigates a high frequency, high magnitude event. A 1 ranking is for a low frequency, low magnitude event. Note that only the damages being mitigated should be considered here, not the entire losses from that event.

#### **5.1.1.8 Potential for repetitive loss reduction**

Those projects that mitigate repetitive losses receive priority consideration here. Common sense dictates that losses that occur frequently will continue to do so until the hazard is mitigated. Projects that will reduce losses that have occurred more than three times receive a rating of 5. Those that do not address repetitive losses receive a rating of 1. Potential to mitigate hazards to future development Proposed actions that can have a direct impact on the vulnerability of future development are given additional consideration. If hazards can be mitigated on the onset of the development, the county will be less vulnerable in the future.

Projects that will have a significant effect on all future development receive a rating of 5. Those that do not affect development should receive a rating of 1.

#### **5.1.1.9 Potential project effectiveness and sustainability**

Two important aspects of all projects are effectiveness and sustainability. For a project to be worthwhile, it needs to be effective and actually mitigate the hazard. A project that is questionable in its effectiveness will score lower in this category. Sustainability is the ability for the project to be maintained. Can the project sustain itself after grant funding is spent? Is maintenance required? If so, are or will the resources be in place to maintain the project. An action that is highly effective and sustainable will receive a ranking of 5. A project with effectiveness that is highly questionable and not easily sustained should receive a ranking of 1.

#### **5.1.1.10 Final ranking**

Upon ranking a project in each of these categories, a total score can be derived by adding together each of the scores. The project can then be ranking high, medium, or low based on the non-planning project thresholds of:

Project Ranking Priority Score

- High 40-65
- Medium 25-39
- Low 9-25

## **5.2 Possible Fire Mitigation Activities**

As part of the implementation of fire mitigation activities in Lewis County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Policy changes for structures and infrastructure in the WUI
- Homesite defensible zone through fuels modification
- Community defensible zone fuels alteration
- Access improvements
- Access creation
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

### 5.3 WUI Safety & Policy

Wildfire mitigation efforts must be supported by a set of policies and regulations at the county level that maintain a solid foundation for safety and consistency. The recommendations enumerated here serve that purpose. Because these items are regulatory in nature, they will not necessarily be accompanied by cost estimates. These recommendations are policy related in nature and therefore are recommendations to the appropriate elected officials; debate and formulation of alternatives will serve to make these recommendations suitable and appropriate.

**Table 5.1. WUI Action Items in Safety and Policy.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.1.a: Amend existing building codes to apply equally to new single housing construction as it does to subdivisions.</b>	<b>Protection of people and structures</b> by applying a standard of road widths, access, and building regulations to insure new homes can be protected while curtailing risks to firefighters (defensible space, access mgmt, water systems, building codes, signage, and maintenance of private forest and range lands)	<b>County Commissioners</b> in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, the Planning and Zoning Department and the Craigmont VFD, Kamiah VFD, Nezperce VFD, and the Winchester VFD.	<ul style="list-style-type: none"> <li>• Year 1 debate and adoption of revised code (2005-06).</li> <li>• Review adequacy of changes annually, make changes as needed.</li> </ul>
<b>5.1.b: Rural Addressing Update</b>	<b>Protection of people and structures</b> by improving database of structures in the county which will link to fire fighting efforts and improved response times. Also linked to developing an enhanced 911 system.	Planning and Zoning in cooperation with the County Commissioners Office	<ul style="list-style-type: none"> <li>• To be implemented during first year (2005), pending funding and adoption by elected officials. May take most of a year to complete.</li> <li>• Estimate cost at around \$45,000 to complete entire county.</li> </ul>
<b>5.1.c: Enhanced 911 Service</b>	<b>Protection of people and structures</b> by improving the ability of emergency response personnel to respond to an emergency.	<b>County Commissioners</b> in combination with County Sheriff's Office, County Assessor's Office, Craigmont VFD, Kamiah VFD, Nezperce VFD, and Winchester VFD.	Can be completed only after the Rural Addressing project is completed. Target implementation during year 2 (2006-07 of this project.
<b>5.1.d: Rural Signage (Road Signs &amp; Rural Fire District Boundary Signs) Improvements across the county</b>	<b>Protection of people, structures, and infrastructure</b> by improving the ability of emergency services personnel, residents, and visitors to navigate roads.	Highway Districts in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, County Commissioners, Craigmont VFD, Kamiah VFD, Nezperce VFD, and the Winchester VFD.	Can be completed during year 1 (2005-06) pending funding to implement the project. Estimate \$15,000 for signs and posting.

**Table 5.1. WUI Action Items in Safety and Policy.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.1.e: Develop County policy concerning building materials used in high-risk WUI areas on existing structures and new construction (e.g., Kamiah, Forest, Winchester)</b>	<b>Protection of people and structures</b> by improving the ability of emergency response personnel to respond to threatened homes in high-risk areas.	Planning and Zoning in cooperation with County Commissioners Office, Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, and the Winchester VFD.	<b>Year 1 (2005) activity:</b> Consider and develop policy to address construction materials for homes and businesses located in high wildfire risk areas. Specifically, a County policy concerning wooden roofing materials and flammable siding, especially where juxtaposed near heavy wildland fuels.
<b>5.1.f: Develop a formal WUI Advisory Committee to advise County Commissioners on WUI Issues and Treatments</b>	<b>Protection of people and structures</b> by improving the ability of decision makers to make informed decisions about wildfire issues.	County Commissioners Office with Cities of Craigmont, Kamiah, Nezperce, and Winchester	<b>Year 1 (2005) activity:</b> Formalize a committee, its membership and service decided on by the County Commissioners, to collaborate on WUI issues within Lewis County. Members potentially to include land management organizations and companies, private landowners, and fire protection personnel.

## **5.4 People and Structures**

The protection of people and structures will be tied together closely as the loss of life in the event of a wildland fire is generally linked to a person who could not, or did not, flee a structure threatened by a wildfire. The other incident is a fire fighter who suffers the loss of life during the combating of a fire. Many of the recommendations in this section will define a set of criteria for implementation while others will be rather specific in extent and application.

Many of the recommendations in this section involve education and increasing awareness of the residents of Lewis County. These recommendations stem from a variety of factors including items that became obvious during the analysis of the public surveys, discussions during public meetings, and observations about choices made by residents living in the Wildland-Urban Interface. Over and over, the common theme was present that pointed to a situation of landowners not recognizing risk factors:

- Homeowners from Winchester, Kamiah, and Forest, in the public mail survey, ranked their homesite wildfire risk factors significantly lower than a random sample of home rankings completed by fire mitigation specialists
- Fire District personnel pointed to numerous examples of inadequate access to homes of people who believe they have adequate ingress
- Discussions with the general public indicated an awareness of wildland fire risk, but they could not generally identify risk factors

- A large number of the respondents to the public mail survey indicated (44%) that they want to participate in educational opportunities focused on the WUI and what they can do to increase their home's chances of surviving a wildfire.

Residents and policy makers of Lewis County should recognize certain factors that exist today, that in their absence would lead to an increase in the risk factors associated with wildland fires in the WUI of Lewis County. These items listed below should be encouraged, acknowledged, and recognized for their contributions to the reduction of wildland fire risks:

- **Livestock Grazing** in and around the communities of Lewis County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Lewis County. Domestic livestock not only eat these grasses, forbs, and shrubs, but also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing additional sets of eyes into the forests and rangelands of the county where they may observe ignitions, or potentially risky activities. Livestock grazing in this region should be encouraged in the future as a low cost, positive tool of wildfire mitigation in the Wildland-Urban Interface and in the wildlands.
- **Forest Management** in Lewis County has been affected greatly by the reduction of operating sawmills in the region. However, the active forest management program of the Idaho Department of Lands, the Nez Perce Tribe and many of the private and industrial forestland owners in the region has led to a significant reduction of wildland fuels where they are closest to homes and infrastructure. An excellent example of this has already been highlighted in this document involving the private management of forestlands around the community of Forest. In addition, forest resource professionals managing these lands, and the lands of the state and federal agencies are generally trained in wildfire protection and recognize risk factors when they occur. One of the reasons that Lewis County forestlands have not been impacted by wildland fires to a greater degree historically, is the presence and activities related to active forest management.
- **Agriculture** is a significant component of Lewis County's economy. Much of the rangeland interface is made up of a mosaic of agricultural crops, even extending to the forestland interface. The original conversion of these lands to agriculture from rangeland, was targeted at the most productive soils and juxtaposition to water. Many of these productive rangeland ecosystems were consequently also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today, is much of the rangeland historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Lewis County is integral to the continued management of wildfire risk in this region.



**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.a: Youth and Adult Wildfire Educational Programs</b>	<b>Protect people and structures</b> by increasing awareness of WUI risks, how to recognize risk factors, and how to modify those factors to reduce risk	Cooperative effort including: <ul style="list-style-type: none"> <li>University of Idaho Cooperative Extension</li> <li>Idaho Department of Lands</li> <li>State and Private Forestry Offices</li> <li>Bureau of Land Management</li> <li>Nez Perce Tribe</li> <li>Local School Districts</li> <li>Cities of Craigmont, Kamiah, Nezperce, and Winchester</li> <li>County Commissioners</li> </ul>	To start immediately using existing educational program materials and staffing. Formal needs assessment should be responsibility of University of Idaho Cooperative Extension faculty and include the development of an integrated WUI educational series by year 2 (2006-07) Costs initially to be funded through existing budgets for these activities to be followed with grant monies to continue the programs as identified in the formal needs assessment.
<b>5.2.b: Wildfire risk assessments of homes in identified communities</b>	<b>Protect people and structures</b> by increasing awareness of specific risk factors of individual homesites in the at-risk landscapes. Only after these are completed can homesite treatments follow.	To be implemented by County Commissioners Office in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, and Wildland Fire Protection Specialists. Actual work may be completed by Wildfire Mitigation Consultants.	<ul style="list-style-type: none"> <li><b>Cost:</b> Approximately \$100 per homesite for inspection, written report, and discussions with the homeowners</li> <li><b>Action Item:</b> Secure funding and contract to complete the inspections during years 1 &amp; 2 (2005-06)</li> <li>Homesite inspection reports and estimated budget for each homesite's treatments will be a requirement to receive funding for treatments through grants.</li> </ul>
		<b>Kamiah Area</b>	<ul style="list-style-type: none"> <li>Approximately 650 homes are in the rural areas of Kamiah with another 480 structures within the Kamiah City area. Approximately 60% of the rural structures and 30% of the structures in the city are in need of assessments and potentially home site asset protection zones, for a total of about 530 homes needing assessments. Estimated cost will be \$53,000.</li> </ul>
		<b>Forest Area</b>	<ul style="list-style-type: none"> <li>Approximately 125 homes are in the rural areas around Forest (within the proposed Forest Fire Protection District). Approximately all of the structures are in need of assessments and potentially home site asset protection zones. Estimated cost will be \$12,500.</li> </ul>
		<b>Winchester Area</b>	<ul style="list-style-type: none"> <li>The Student Conservation Association – Fire Education Corps completed home site assessments during 2004.</li> </ul>

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.c: Homesite WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Lewis County	<b>County Commissioners</b> in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, and Fire Mitigation Consulting company	<ul style="list-style-type: none"> <li>Actual funding level will be based on the outcomes of the homesite assessments and cost estimates</li> <li><b>Estimate</b> that treatments in rangelands will cost approximately \$850 per homesite for a defensible space of roughly 150'.</li> <li>Estimate that treatments in forestland will cost roughly \$1,250 per homesite for a defensible space of about 200'.</li> <li>Homesite treatments can begin with the securing of funding for the treatments and immediate implementation in 2004 and will continue from year 1 through 5 (2008).</li> </ul>
		<i>Complete concurrently with 5.4.b</i>	
		<b>Kamiah Area</b>	<ul style="list-style-type: none"> <li>Approximately 100 homes will receive assessments and be in need of asset protection zone construction (fuels treatments). Estimate an average cost \$1,500 per homesite in this area for a total estimated cost of \$150,000.</li> <li>The total assessed value of homes in this area is \$14.0 million for a Benefit-Cost Ratio of 93:1.</li> </ul>
		<b>Forest Area</b>	<ul style="list-style-type: none"> <li>Approximately 25 homes are in the rural areas around Forest (proposed Forest Fire Protection District within Lewis County). Approximately all of the structures in need of treatments. Estimated cost will be \$37,500.</li> <li>The total assessed value of homes in this area is \$5.2 million for a Benefit-Cost Ratio of 138:1.</li> </ul>
		<b>Winchester Area</b>	<ul style="list-style-type: none"> <li>Approximately 60 homes are in the rural areas around Winchester. Approximately all of the structures in need of treatments. Estimated cost will be \$90,000.</li> <li>The total assessed value of homes in this area is \$16.4 million for a Benefit-Cost Ratio of 182:1.</li> </ul>

Table 5.2. WUI Action Items for People and Structures.

Action Item	Goals and Objectives	Responsible Organization	Action Items, Planning Horizon and Estimated Costs
<b>5.2.d: Community Defensible Zone WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding high risk communities in the WUI of Lewis County	<b>County Commissioners</b> in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, <b>Nez Perce Tribe and BLM</b> to identify funding availability and project implementation opportunities.	<ul style="list-style-type: none"> <li>Actual funding level will be based on the outcomes of the homesite assessments and cost estimates.</li> <li><b>Years 2-5 (2006-09):</b> Treat high risk wildland fuels from homesite defensible space treatments to an area extending 400 feet to 750 feet beyond home defensible spaces, where steep slopes and high accumulations of risky fuels exist near homes and infrastructure. Should link together home treatment areas. Treatments target high risk concentrations of fuels and not 100% of the area identified. To be completed only after or during the creation of home defensible spaces have been implemented.</li> <li><b>Communities and areas to target:</b> Kamiah, Forest, Winchester, Reubens. Others based on additional assessments.</li> <li>Approximate average cost on a per structure basis is \$1,500. When coupled with the home defensibility space costs of \$1,250, the <b>average B/C Ratio in forestland areas is 14.4:1.</b></li> </ul>
<b>5.2.e: Maintenance of Homesite WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Lewis County.	<b>County Commissioners Office</b> in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, and local home owners.	<ul style="list-style-type: none"> <li>Homesite defensibility treatments must be maintained periodically to sustain benefits of the initial treatments.</li> <li>Each site should be assessed 5 years following initial treatment</li> <li>Estimated re-inspection cost will be \$50 per homesite on all sites initially treated or recommended for future inspections</li> <li>Follow-up inspection reports with treatments as recommended years 5 through 10.</li> </ul>
<b>5.2.f: Re-entry of Homesite WUI Treatments</b>	<b>Protect people, structures, and increase fire fighter safety</b> by reducing the risk factors surrounding homes in the WUI of Lewis County.	<b>County Commissioners Office</b> in cooperation with Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, and local home owners.	<ul style="list-style-type: none"> <li>Re-entry treatments will be needed periodically to maintain the benefits of the initial WUI home treatments. Each re-entry schedule should be based on the initial inspection report recommendations, observations, and changes in local conditions. Generally occurs every 5-10 years.</li> </ul>

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.g: Access Improvements of bridges, cattle guards, and limiting road surfaces</b>	<b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Reduces the risk of a road failure that leads to the isolation of people or the limitation of emergency vehicle and personnel access during an emergency.	<b>Highway Districts</b> in cooperation with the BLM, State of Idaho (Lands and Transportation), Nez Perce Tribe, and industrial forestland owners (e.g., Boise Corp.). Cooperation with County Commissioners and Cities of Craigmont, Kamiah, Nezperce, and Winchester	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of travel surfaces, bridges, and cattle guards in Lewis County as to location. Secure funding for implementation of this project (grants)</li> <li>• <b>Year 2 (2006):</b> Conduct engineering assessment of limiting weight restrictions for all surfaces (e.g., bridge weight load maximums). Estimate cost of \$100,000 which might be shared between County, Nez Perce Tribe, BLM, State, and private based on landownership associated with road locations.</li> <li>• <b>Year 2 (2006):</b> Post weight restriction signs on all limiting crossings, copy information to rural fire districts and wildland fire protection agencies in affected areas. Estimate cost at roughly \$15-\$25,000 for signs and posting.</li> <li>• <b>Year 3 (2007):</b> Identify limiting road surfaces in need of improvements to support wildland fire fighting vehicles and other emergency equipment. Develop plan for improving limiting surfaces including budgets, timing, and resources to be protected for prioritization of projects (benefit/cost ratio analysis). Create budget based on full assessment.</li> </ul>
<b>5.2.h: Access Improvements for Kamiah</b>	<b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Allows for alternative escape routes when a primary access is compromised.	<b>County Roads and Bridges Department</b> in cooperation with Nez Perce Tribe, BLM, State of Idaho (Lands and Transportation), and city of Kamiah and area landowners.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of roads in Lewis County as to location. Secure funding for implementation of this project (grants).</li> <li>• <b>Year 2 (2006):</b> Specifically address access issues in Kamiah and others identified in assessment. Develop alternatives for improving access limitations. Landowners and agencies to play significant role in alternative development.</li> <li>• <b>Year 3 (2007):</b> Secure funding and implement projects to improve limiting access. No way to estimate costs until priorities are set and options identified.</li> </ul>

**Table 5.2. WUI Action Items for People and Structures.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items, Planning Horizon and Estimated Costs</b>
<b>5.2.i: Access Improvements through road-side fuels management</b>	<b>Protection of people, structures, infrastructure, and economy</b> by improving access for residents and fire fighting personnel in the event of a wildfire. Allows for a road based defensible area that can be linked to a terrain based defensible areas.	<b>County Roads and Bridges Department</b> in cooperation with Nez Perce Tribe, BLM, State of Idaho (Lands and Transportation), USFS, industrial forestland owners, County Commissioners and Cities of Craigmont, Kamiah, Nezperce, and Winchester.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Update existing assessment of roads in Lewis County as to location. Secure funding for implementation of this project (grants).</li> <li>• <b>Year 2 (2006):</b> Specifically address access issues to Kamiah, Forest, Winchester, Reubens, and others identified in assessment, such as Highway 12 corridor. Identify forestland and rangeland fuels difficult to control during wildfire that would also respond well to thinning, pruning, and brush cutting (hand pile and burn or chip), while increasing ingress and egress use in wildfire emergencies. Target 100' on downhill side of roads and 75' on uphill side for estimated cost of \$15,000 per mile of road treated. If 10 miles of roadway are prioritized for treatment (est.) <b>B/C Ratio of 14.7:1 is achieved.</b> This B/C ratio may be maintained in many rural treatment areas of the county.</li> <li>• <b>Year 3 (2007):</b> Secure funding and implement projects to treat road-side fuels.</li> </ul>

## 5.5 *Infrastructure*

Significant infrastructure refers to the communications, transportation (road and rail networks), energy transport supply systems (gas and power lines), and water supply that service a region or a surrounding area. All of these components are important to the North Central Idaho Area, and to Lewis County specifically. These networks are by definition a part of the Wildland-Urban Interface in the protection of people, structures, **infrastructure**, and unique ecosystems. Without supporting infrastructure a community's structures may be protected, but the economy and way of life lost. As such, a variety of components will be considered here in terms of management philosophy, potential policy recommendations, and recommendations.

**Communication Infrastructure:** This component of the WUI seems to be diversified across the county with multiple source and destination points, and a spread-out support network. Although site specific treatments will impact directly local networks, little needs done to insure the system's viability.

Emergency services radio communications have been aided by a network of communications towers in the county. In the past communications along US Highway 95 from Winchester to Culdesac have been problematic. The addition of a communications tower near Winchester to serve this canyon was made a priority early in this planning process. In October 2004, the Idaho Bureau of Homeland Security provided a grant to the Lewis County Sheriff's office to install this communications tower.

**Transportation Infrastructure (road and rail networks):** This component of the WUI has some significant potential limitations in Lewis County. U.S. Highway 95, which dissects Lewis County, is the primary maintained route linking north and south Idaho. Thus, most intrastate traffic flowing north to south or vice versa travels through the County. The section of this roadway known as the Winchester Grade between the Reubens Road and Culdesac is characterized by a fairly steep, winding grade bordered abruptly by timbered slopes. Recent improvements to the grade have resulted in wider shoulders and more turnouts and passing lanes. However, significant tree mortality due to past wildfire activity on the eastern slope of the canyon reiterates the need for mitigation measures to ensure the protection of this indispensable infrastructure.

U.S. Highway 12, which connects communities along the Clearwater River to the city of Lewiston, establishes the eastern boundary of Lewis County. This part of the roadway was carved from the lower canyon walls mimicking the path of the river. Currently, much of this corridor is very narrow with few turnouts or passing lanes. In addition to being a hauling route for many area truckers, U.S. Highway 12 is also part of the Clearwater Canyon Scenic Route and the Lewis and Clark Trail. Recreational traffic increases significantly during the summer months. Ignitions along the Clearwater River corridor have the potential to become large wildland fires threatening many lives and structures.

Other roads in the county have limiting characteristics, such as steep grades, narrow travel surfaces, sharp turning radii, low load limit bridges and cattle guards, and heavy accumulations of fuels adjacent to, and overtopping some roads. Some of these road surfaces access remote forestland and rangeland areas. While their improvements will facilitate access in the case of a wildfire, they are not the priority for treatments in the county. Roads that have these inferior characteristics and access homes and businesses are the priority for improvements in the county.

The Camas Prairie Railroad that historically transported grain, goods, and other materials between Grangeville and Lewiston passes through Lewis County along nearly the same path as U.S. Highway 95. Currently, this railway is inactive; however, there are plans to reopen a

section of this track. Although not encompassed by the borders of Lewis County, an active branch of the Camas Prairie Railroad travels along the eastern shore of the Clearwater River and therefore impacts the economy of Lewis County.

**Energy Transport Supply Systems (gas and power lines):** A number of power lines crisscross Lewis County. Unfortunately, many of these power lines cross over forestland ecosystems. When fires ignite in these vegetation types, the fires tend to be slower moving and burn at relatively high intensities. Additionally, there is a potential for high temperatures and low humidity with high winds to produce enough heat and smoke to threaten power line stability. Most power line corridors have been cleared of vegetation both near the wires and from the ground below. Observations across the county of these high tension power lines lead to the conclusion that current conditions coupled with urban developments have mitigated this potential substantially. It is the recommendation of this Wildfire Mitigation Plan that this situation be evaluated annually and monitored but that treatments not be specifically targeted at this time. The use of these areas as “fire breaks” should be evaluated further, especially in light of the treatments enumerated in this plan (eg., intensive livestock grazing, mechanical treatments, and herbicide treatments).

**Water Supply:** In many of Idaho’s communities, water is derived from surface flow that is treated and piped to homes and businesses. When wildfires burn a region, they threaten these watersheds by the removal of vegetation, creation of ash and sediment. As such, watersheds should be afforded the highest level of protection from catastrophic wildfire impacts. In Lewis County, water is supplied to many homes by single home or multiple home wells. However, the community of Kamiah depends on a surface water resource as one of its primary water sources.

## **5.6 Resource and Capability Enhancements**

There are a number of resource and capability enhancements identified by the rural and wildland fire fighting districts in Lewis County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies in the WUI and are fully supported by the planning committee.

Specific repeated themes of needed resources and capabilities include:

- More water tenders and newer engines for Rural Fire Districts
- Improved radio capabilities within each district and for mutual aid operations
- Retention and recruitment of volunteers
- Training and development of rural firefighters in structure and wildland fire
- New facilities (fire stations) for housing existing equipment (Craigmont VFD) and forward advancing equipment and personnel to areas experiencing population growth (Nez Perce VFD).
- Formation of 3 new fire districts to cover new areas
- Extensions of 3 current districts to cover new areas

Although additional, and specific, needs were enumerated by the districts in Lewis County, these items were identified by multiple districts and in the public meetings. The implementation of each issue will rely on either the isolated efforts of the rural fire districts or a concerted effort by the county to achieve equitable enhancements across all of the districts. Given historic trends, individual departments competing against neighboring departments for grant monies and equipment will not necessarily achieve county wide equity. However, the Clearwater Resource

Conservation and Development Council, Inc., may be an organization uniquely suited to work with all of the districts in Lewis County and adjacent counties to assist in the prioritization of needs across district and even county lines. Once prioritized, the Clearwater RC&D is in a position to assist these districts with identifying, competing for, and obtaining grants and equipment to meet these needs.

**Table 5.3. WUI Action Items in Fire Fighting Resources and Capabilities.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.3.a: Facilities, land, business plan, and basic supplies for new fire protection districts.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	Lewis County Commissioners, Clearwater RC&D, Cities of Craigmont, Kamiah, Nezperce, and Winchester, and local residents	<ul style="list-style-type: none"> <li>• Estimate of Costs: <ul style="list-style-type: none"> <li>◦ \$500,000 each</li> </ul> </li> <li>• 2 Year Planning Horizon</li> <li>• <b>Forest Rural</b></li> <li>• <b>Northwest Lewis County Rural</b></li> <li>• <b>Central Ridge Rural</b></li> </ul>
<b>5.3.b: Facilities, land, business plan, and basic supplies for extending rural fire protection districts.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	Lewis County Commissioners, Cities of Craigmont, Kamiah, Nezperce, and Winchester, Clearwater RC&D, local residents, Craigmont VFD, Kamiah VFD, Nezperce VFD, and the Winchester VFD.	<ul style="list-style-type: none"> <li>• Estimate of Costs: <ul style="list-style-type: none"> <li>◦ \$250,000 each</li> </ul> </li> <li>• 2 Year Planning Horizon</li> <li>• <b>Nezperce Rural Fire Extension</b></li> <li>• <b>Kamiah Rural Fire Extension</b></li> <li>• <b>Greer Rural Fire Extension</b></li> </ul>
<b>5.3.c: Obtain 5,000 gallon water tenders for rural fire districts (4).</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Clearwater RC&amp;D</b> in cooperation with Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, IDL, USFS, Lewis County Commissioners, and Cities of Craigmont, Kamiah, Nezperce, and Winchester.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Verify stated need still exists, develop budget, and locate funding or equipment (surplus) sources.</li> <li>• <b>Year 1 or 2 (2005-06):</b> Acquire and deliver needed equipment to districts based on prioritization by need and funding awards.</li> </ul>
<b>5.3.d: Enhance radio availability in each district, link in to existing dispatch, and improve range within the region, conversion to consistent standard of radio types</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	<b>Clearwater RC&amp;D</b> in cooperation with Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, IDL, USFS, Lewis County Commissioners, and Cities of Craigmont, Kamiah, Nezperce, and Winchester.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Summarize existing two-way radio capabilities and limitations. Identify costs to upgrade existing equipment and locate funding opportunities.</li> <li>• <b>Year 2 (2006):</b> Acquire and install upgrades as needed.</li> </ul>



**Table 5.3. WUI Action Items in Fire Fighting Resources and Capabilities.**

<b>Action Item</b>	<b>Goals and Objectives</b>	<b>Responsible Organization</b>	<b>Action Items &amp; Planning Horizon</b>
<b>5.3.e: Retention of Volunteer Fire Fighters</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	County Commissioners, Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, IDL, and USFS working with broad base of county citizenry to identify options, determine plan of action, and implement it.	<ul style="list-style-type: none"> <li>• 5 Year Planning Horizon, extended planning time frame</li> <li>• Target an increased recruitment (+10%) and retention (+20% longevity) of volunteers</li> <li>• <b>Year 1 (2005):</b> Develop incentives program and implement it.</li> </ul>
<b>5.4.f: Increased training and capabilities of fire fighters</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	Craigmont VFD, Kamiah VFD, Nezperce VFD, and Winchester VFD working with the BLM, IDL, and USFS for wildland training opportunities and with the State Fire Marshall's Office for structural fire fighting training.	<ul style="list-style-type: none"> <li>• <b>Year 1 (2005):</b> Develop a multi-county training schedule that extends 2 or 3 years in advance (continuously).</li> <li>• Identify funding and resources needed to carry out training opportunities and sources of each to acquire.</li> <li>• Year 1 (2005): Begin implementing training opportunities for volunteers.</li> </ul>
<b>5.4.g. Develop Mutual Aid Agreements between all Rural Fire Districts and the Federal and State wildfire fighting agencies working in and around Lewis County.</b>	<b>Protection of people and structures</b> by direct fire fighting capability enhancements.	Cities of Craigmont, Kamiah, Nezperce, and Winchester, Craigmont VFD, Kamiah VFD, Nezperce VFD, Winchester VFD, BLM, USFS, BIA, IDL, State Fire Marshall's Office.	<ul style="list-style-type: none"> <li>• 2005: Identify current mutual aid agreements and needed agreements.</li> <li>• Draft and implement agreements across the county.</li> </ul>

## **5.7 Regional Land Management Recommendations**

Reference has been given to the role that forestry, grazing and agriculture have in promoting wildfire mitigation services through active management. Lewis County is a rural county by any measure. It is dominated by wide expanses of forest and rangelands intermixed with communities and rural houses.

Wildfires will continue to ignite and burn depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will insure that these lands have value to society and the local region. We encourage the Bureau of Land Management, US Forest Service, the Nez Perce Tribe, the Idaho Department of Lands, Industrial forestland owners, private forestland owners, and all agricultural landowners in the region to actively manage their Wildland-Urban Interface lands in a manner consistent with the management of reducing fuels and risks in this zone.